

## REMARKS

### I. Status of the Claims

Claims 14-28 have been cancelled as drawn to a non-elected species. Claims 2 and 10 were previously cancelled. Claim 1 has been amended. Claims 1, 3-9, 11-13, 29, and 30 are pending.

### II. Rejections Under 35 U.S.C. § 102

#### A. Durrani et al.

Claims 1, 3-9, and 11-13 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Durrani *et al.* Applicant traverses this rejection.

Durrani does not teach all of the limitations of the current claims, namely a peptide having the sequence of SEQ ID NOs:1, 3, 4, 5, 6, or 7. Applicants note that current claim 1 is directed to a “composition for enhancing immune response in an animal, comprising: a peptide selected from the group SEQ. ID. NO: 1, SEQ. ID. NO: 3, SEQ. ID. NO: 4, SEQ. ID. NO: 5, SEQ. ID. NO: 6, SEQ. ID. NO: 7, and further comprising an antigen.” In contrast, Durrani discloses a peptide comprising residues 731-752 of the gp41 transmembrane protein of HIV-1 strain IIIB. This peptide does not comprise the sequence any of SEQ ID NOs:1, 3, 4, 5, 6, or 7.

For at least these reasons, claims 1, 3-9, and 11-13 are novel over Durrani. Applicant respectfully requests the withdrawal of this rejection.

#### B. Coeffier et al.

Claims 1, 4, 9, 12 and 13 are further rejected under 35 U.S.C. § 102(a) as allegedly anticipated by Coeffier *et al.* Applicants traverse.

The Action fails to establish a *prima facie* case of anticipation because Coeffier does not teach all of the limitations of the current claims. Coeffier does not disclose a peptide having the

sequence of SEQ ID NOs:1, 3, 4, 5, 6, or 7. Claim 1 is currently directed to a “composition for enhancing immune response in an animal, comprising: a peptide selected from the group SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and further comprising an antigen.” Claims 3, 9, 12, and 13 depend from claim 1 and therefore incorporate all the limitations thereof. Applicants note that Coeffier discloses SEQ ID NO:2, however does not disclose any of the recited sequences. Because Coeffier does not teach every limitation of the claims, it does not anticipate the present claims.

The rejection of claims 1, 4, 9, 12 and 13 under 35 U.S.C. §102(b) as being anticipated by Coeffier should therefore be withdrawn.

### **III. Rejections Under 35 U.S.C. § 103**

Claims 1, 3-9, 11-13, 29, and 30 are rejected under 35 U.S.C. § 103 as allegedly obvious over Durrani *et al.* and Backstrom *et al.* (1994) or Backstrom *et al.* (1995). In particular, it is asserted that Backstrom teach that the cholera toxin B can be co-expressed and administered with an antigen to produce an enhanced immune response. Based on this and the teachings of Durrani, it is asserted that it would have been obvious to one of skill in the art to combine the methods of Durrani and Backstrom to make the gp41 peptide comprising the P1 peptide fused with the cholera toxin B-unit and then to administer the fusion peptide to produce an enhanced immune response. Applicants respectfully traverse.

The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *see also KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007) (“While the sequence of these

questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.”)

With regard to the scope and content of the prior art, the Office has failed to establish that the combination of Durrani and Backstrom teaches or suggests every element of the rejected claims, namely, a peptide having the sequence of SEQ ID NOs:1, 3, 4, 5, 6, 7 or 9. As explained above, Durrani does not disclose or suggest a peptide comprising a claimed sequence. In contrast, Durrani discloses a peptide comprising residues 731-752 of the gp41 transmembrane protein of HIV-1 strain IIIB. This peptide does not comprise the sequence any of SEQ ID NOs:1, 3, 4, 5, 6, 7, or 9.

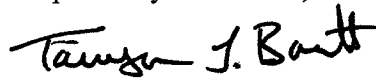
The Backstrom references do not remedy the failure of Durrani to teach all of the claim elements. Backstrom is limited to the use of cholera toxin B in fusion proteins with peptide epitopes and does not disclose or suggest the currently claimed sequences. Thus, the cited references, alone and in combination, fail to teach or suggest all of the elements of the independent claims, and therefore they cannot render the claims obviousness.

For at least the above reasons, the Action fails to establish that claims 1, 3-9, 11-13 and 29-30 are obvious over the combination of Durrani and Backstrom, and Applicants therefore respectfully request that the obviousness rejection of those claims be withdrawn.

#### IV. Conclusion

Applicants believe that the present document is a full and complete response to the Office Action dated December 11, 2007. Applicants submit that the present case is in condition for allowance and such favorable action is requested. The Examiner is invited to contact the undersigned attorney at 512-536-3123 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



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